CLAIMS

What Is Claimed Is:

1. An emitter locator system, comprising:

a mobile DF set, said set comprising a receiver for receiving incident signal transmissions;

a line of bearing generating system in operative communication with said receiver and configured to generate lines of bearing responsive to said received signal transmissions;

an LOB error generating system in operative communication with said line of bearing generating system and configured to generate error factors related to said lines of bearing;

an probability overlay generating system in operative communication with said LOB error generating system and configured to generate an overlay probability map responsive to said error factors; and

display means for visually displaying said lines of bearing, said error factors and said overlay map.

2. The system of Claim 1, wherein:

said incident signal transmissions are further defined by strength and clarity factors;

said line of bearing generating system further generates quality numbers for each said line of bearing responsive to said strength and clarity factors; and

said LOB error generating system generates said error factors responsive to said quality numbers.

3. The system of Claim 2, further comprising a second DF set in communication with said mobile DF set, said second set comprising a receiver for receiving incidental signal transmissions, the system further comprising:

said line of bearing generating system;

said LOB error generating system;

said probability overlay generating system; and

said display means for further visually displaying said lines of bearing, said error factors and said overlay map, said lines of bearing generated by said mobile DF set and said second DF set.

4. The system of Claim 3, wherein said display means of said mobile DF set further displays said lines of bearing generated by said second DF set.

5. The system of Claim 2, wherein said mobile DF set further comprises a position estimating system for determining the spacial location of said transmitter responsive to said lines of bearing and said LOB errors.

6. The system of Claim 5, wherein said display means further displays said spacial location of said transmitter.

7. The system of Claim 6, wherein said probability overlay generating system is further responsive to said spacial location of said transmitter.

8. The system of Claim 7, wherein said probability overlays comprise a two-dimensional composite of concentric shapes.

9. The system of Claim 8, wherein said concentric shapes comprise an inner shape concentric to an outer shape, said inner shape configuration representative of said error

factors having relatively small values and said outer shape configuration representative of said error factors having relatively large values.

10. A direction-finding method comprising the steps of:

establishing a cross-over position point;

relocating a receiver to a new receiver spacial location;

said receiver at said new receiver position receiving a transmission from a transmitter at a transmitter position;

determining a real-time line of bearing from said receiver to said transmitter;

generating a connecting vector from said real-time line of bearing to said cross-over position point; and

identifying a real-time position of said transmitter along said connecting vector.

displaying said real-time position on a user display panel; and

generating and displaying an probability overlay map responsive to said real-time position and said quality factor on said user display panel.

11. The method of Claim 10, wherein said identifying step further comprises assigning a probability factor to said real-time position of said transmitter responsive to said quality factor and said probability overlay map generating and displaying is responsive to said probability factor.

12. The method of Claim 11, further comprising a repeating step to repeat said relocating, receiving, determining, generating, identifying, displaying and generating steps until said probability factor exceeds a predetermined threshold value.

13. The method of Claim 11, further comprising a repeating step to repeat said relocating, receiving, determining, generating, identifying, displaying and generating steps until said probability factor meets a user-defined threshold value.

14. The method of Claim 11, further comprising a repeating step to repeat said relocating, receiving, determining, generating, identifying, displaying and generating steps until a user terminates said direction finding method.